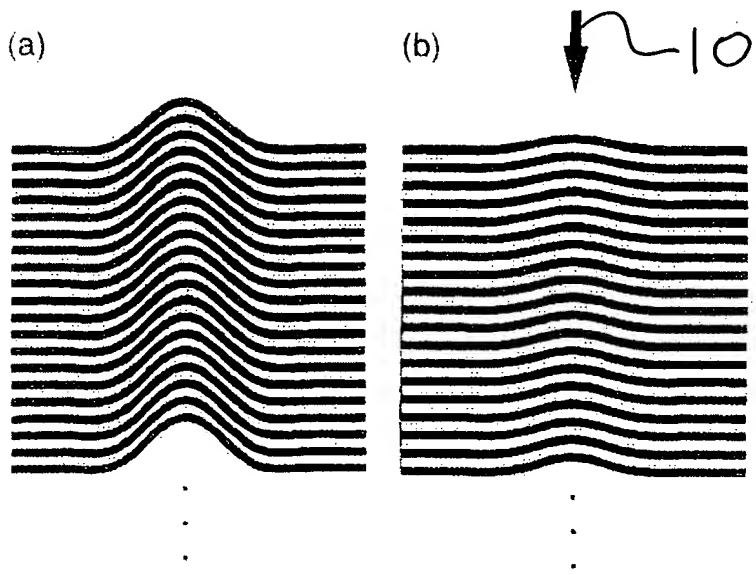
FIG. 1A

FIG. 1B



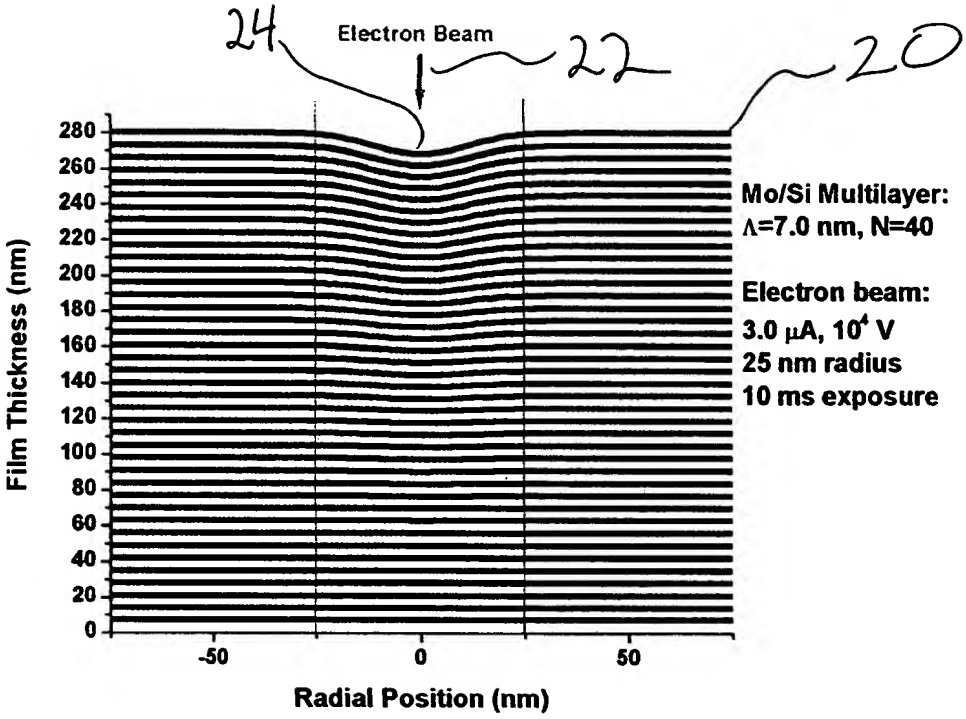

24
Electron Beam
22
20
Film Thickness (nm)
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
-50
0
50
Radial Position (nm)
Mo/Si Multilayer:
Λ=7.0 nm, N=40
Electron beam:
3.0 μA, 10⁴ V
25 nm radius
10 ms exposure

FIG. 2

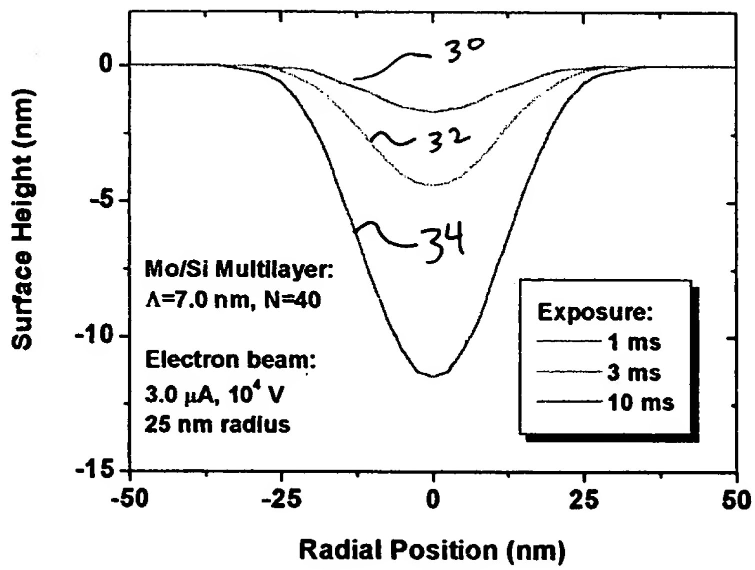


FIG. 3

09925052 "092596960

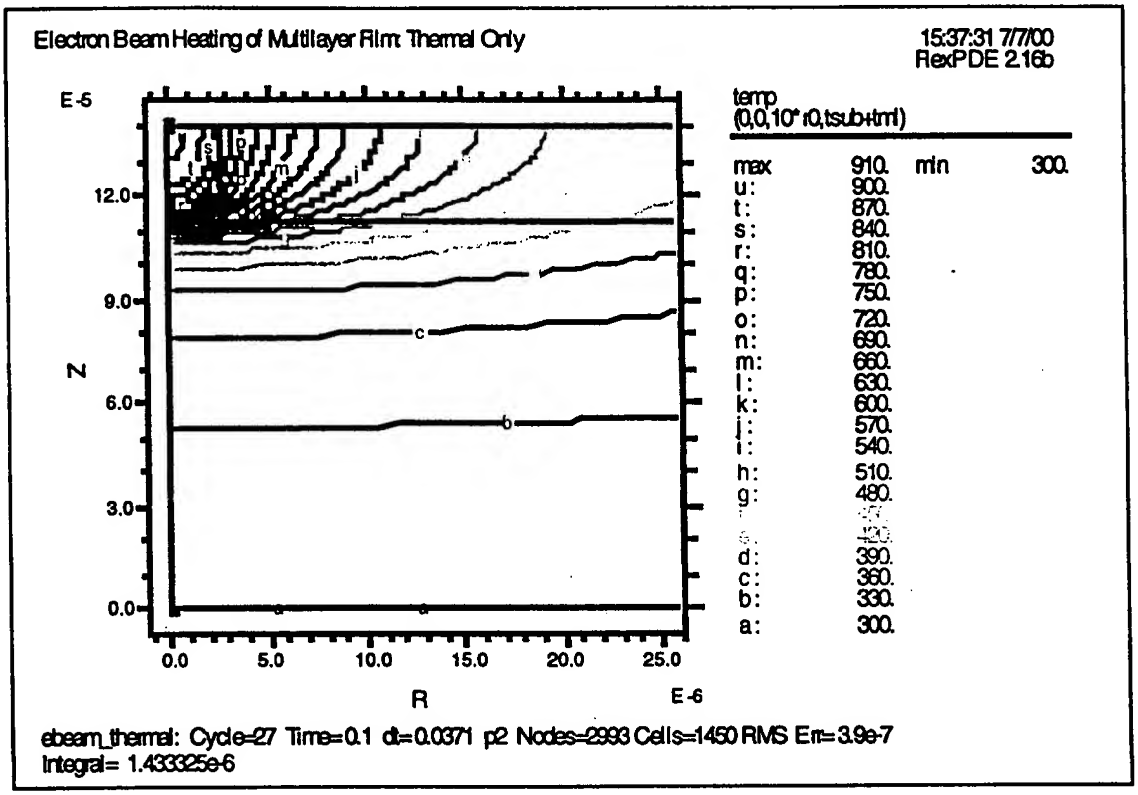


Figure 1 Temperature profile for a Mo/Si multilayer film on a Si substrate heated by an electron beam having a current and voltage of 3 μA and 10 kV, respectively. The electron beam is incident on the top left corner and has a radius of 25 nm.

FIG. 4

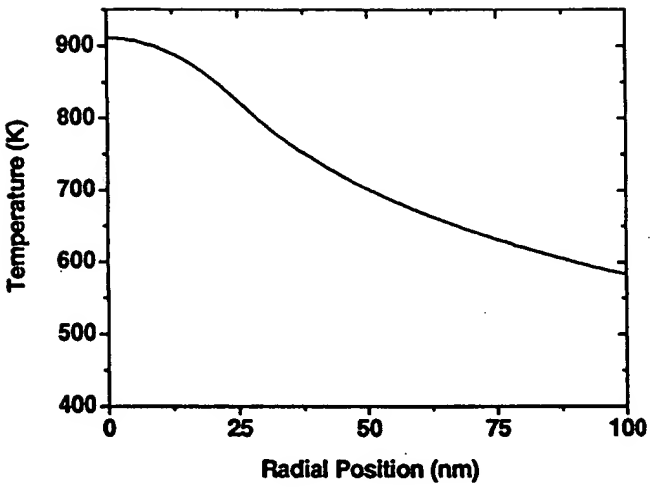


Figure 2 Temperature at the top surface (z = 280 nm) of the multilayer film as a function of radial position for heating via an electron beam.

FIG. 5

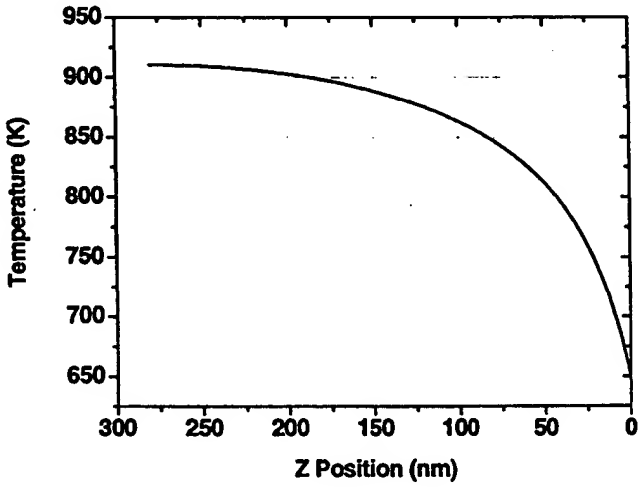


Figure 3 Temperature at the center of the electron beam (r = 0) as a function of depth in the multilayer film. The total thickness of the film is 280 nm.

FIG. 6

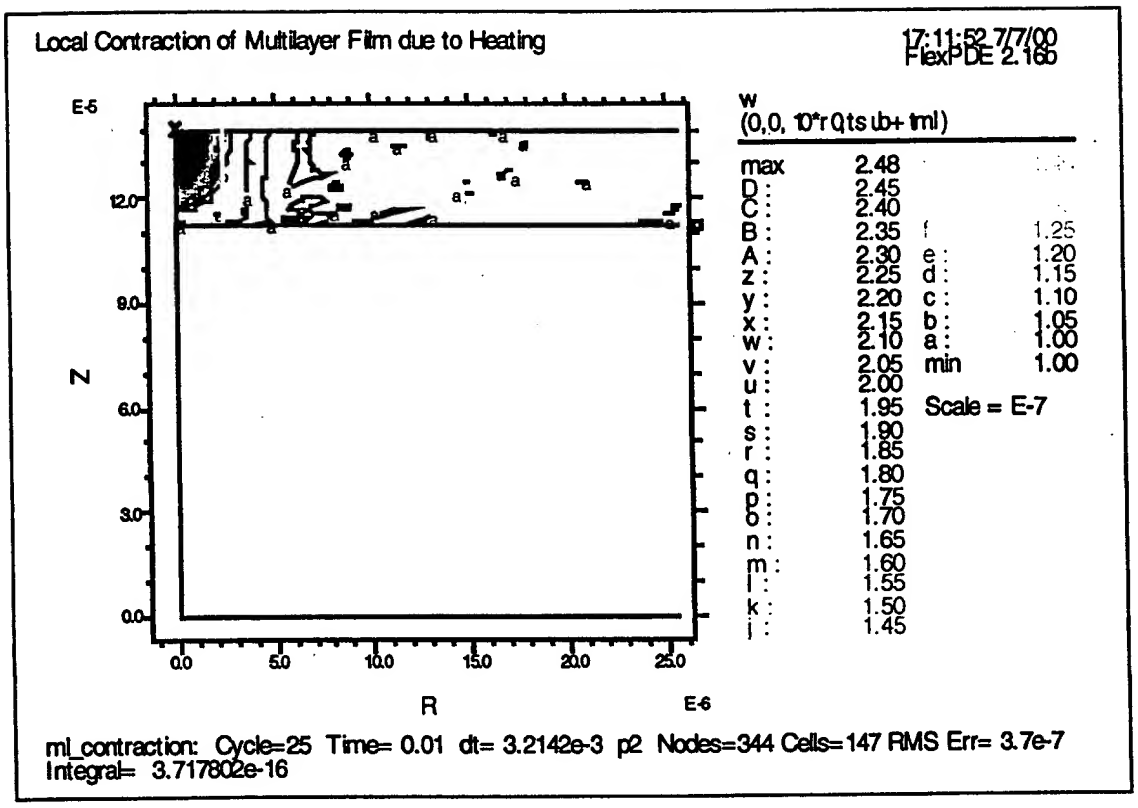


Figure 7 Contour plot showing the width w of the silicide interlayer within the Mo/Si multilayer film after an electron beam exposure of 10 ms. The width varies from the as-deposited value of w_0 = 1.0 nm to a maximum value of 2.48 nm in the center of the electron beam.

FIG. 7

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